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Do Structural Equity Issues in Middle Schools Lead to Achievement Disparities?

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Striking statistically significant differences were noted across school ranking conditions in terms of professional teacher preparation, organizational health variables, school leadership characteristics, academic emphasis, and resource support. The general conclusion of this study is that a strong correlation exists between structural equity issues in middle schools and academic achievement.

A large representative sample of middle schools was targeted for systematic study. The schools were categorized into three clusters (high, middle, and low performing schools). Participants were asked to complete an adapted version of the Hoy and Sabo (1998) OHI-RM (Organizational Health Inventory- Revised Middle) instrument. Statistically significant differences were documented across the three categories. The findings provide support for the view that structural instructional problems may create educational inequities that lead to academic achievement disparities.

Schools and corporate enterprise share many of the same organizational structures. Each strives to build a learning organization characterized by teams of individuals that work toward a shared vision. Administrative leadership often supports the professional growth of team members so that many develop strong mental models of effectiveness. Throughout the process, individuals maintain the equitable opportunity to express views regarding change of structure or policy.

Structural equity in education often depends on the strength of beliefs, opportunity, and achievement across a school setting. Stakeholders strive toward equitable educational opportunities when each shares and works toward the goal of improving learner achievement outcomes. Through a focus on teacher affiliation, resource support, principal influence, academic emphasis, collegial leadership, and institutional integrity a mental model of equity is formed within the organizational structures.

The theoretical foundation of this study was built on two pillars (see Table 1). First, Senge's (1990) organizational change theory served as a conceptual frame for this study. Second, the construct of organizational health was investigated through the administration of the Organizational Health Inventory- Revised Middle (OHI-RM) to study participants. The inventory described the "vitality and dynamics of professional interactions of students, teachers, and administrators" in middle school settings (p. 54). Hoy and Sabo further postulated that "organizational health refers to the positive linkages and harmony within and between key elements in the school." They stated that "healthy interpersonal dynamics between administrators and teachers and between teachers and students are key elements of quality schools" (p. 24). Senge suggested five distinctive traits of a learning organization: systems thinking, personal mastery, mental models, building a shared vision, and team learning. The OHI-RM measured six dimensions of the organizational health of middle schools: academic emphasis, teacher affiliation, principal influence, collegial leadership, resource support, and institutional integrity. **(See Table 1)**

Melding these two organizing theories led to the research question of this study: When controlling for school ranking conditions, which structural factors were more directly related to equity at the middle school level? The premise was that curricular implementation and student performance cannot be effectively changed without knowledge about the organizations in which instruction and learning occurs. To address the research question, the study investigated whether public middle schools were organizationally different across the school ranking conditions of low, middle, and high achievement as determined by student performance on state mandated standardized assessments.

In a study similar to that reported here, Brown, Roney, and Anfara (2003) investigated the difference between high performing suburban middle schools and low performing urban middle schools to potentially explain the organizational structural differences that may lead to instructional disparities and achievement lags. The investigators found that a focus on the elements of the middle school concept by and of themselves will not enhance nor sustain student performance if attention to organizational health variables such as academic focus, teacher affiliation, and resource support were missing. As is later reported, results of the present study were quite similar to that of the Brown and associates study.

Table 1:
Pillars and Characteristics of Theoretical Foundations

Dimensions of Organizational Health (Hoy & Sabo, 1998)	Dimensions of Organizational Change Theory (Senge, 1990)
INSTITUTIONAL LEVEL **Institutional Integrity** Educational integrity is maintained. The school does not succumb to environmental pressures from parents and community. **MANAGERIAL LEVEL** **Collegial Leadership** The principal is perceived to be equitable, supportive, friendly, and open. He or she also communicates expectation for high performance. Principal behavior was measured across three constructs: supportive behavior, directive behavior, and restrictive behavior. **Principal Influence** The principal has an influential voice when communicating with superiors. Hierarchy does not impede the school's progress. **Resource Support** Teachers have access to adequate and even extra supplies and instructional materials. **TECHNICAL LEVEL** **Teacher Affiliation** Teachers feel positively connected to the school. They have established positive relationships with colleagues, students. Teachers have a sense of commitment to their students and colleagues. They have the desire to accomplish their work with enthusiasm. Teacher behavior was measured across three constructs: collegial behavior, committed behavior, and/ or disengaged behavior. **Academic Emphasis** Individuals within the school strive for academic excellence. High but achievable goals are set. Students are provided with a safe and conducive learning environment. Teachers have confidence in student ability. Students have the drive to succeed and respect academic excellence.	**System's Thinking** An entire organization's structure is analyzed to determine how individual components interact to affect the success of the institution. **Personal Mastery** School staff strive for personal mastery work toward the collective goal of the organization. **Mental Models** Deeply ingrained assumptions, generalizations, and images held by school stakeholders. Mental models are maintained through organizational openness and internal pictures. **Building a Shared Vision** Focus is the creation of genuine commitment, rather than compliance. **Team Learning** Team intelligence exceeds individual intelligence.

Conceptual Framework

Successful middle schools enhance student achievement through the design and implementation of organizational, curricular, pedagogical, and programmatic plans (Roney & Coleman, 2008). Advocates deem middle schools effective if they are designed to address the developmental readiness, needs, and interests of their students (National Middle School Association, 2010). Our best schools are highly adaptable, continually evolving learning organizations. Effective schools operate within an open system populated by distinctive groups each having different functions.

Hoy and Sabo's (1998) study of New Jersey middle schools served as the model for the methodology employed to complete the study of which this report is concerned. Their study used a sample of 87 middle schools throughout all regions of New Jersey: urban, suburban, and rural. More than 2,700 teachers responded to the survey instrument. Similar to the current study, only schools that called themselves middle school were included in the sample.

It is the quality and level of equity in relation to human contact, the organizational structure in which the learning environment is situated, and the issues that are present that determine what students learn (DuFour & Eaker, 1998). Academic efficiency and success are predicated upon school climatic variables. Culture is highly visible within an organization such as a school and consequently prone to external forces of judgment and control. In this study, an effort was made to determine whether these external forces were more prevalent in high, middle, or low ranking schools. Organizational variables have the potential to significantly affect student academic achievement. Yet, structural diversification across school ranking conditions limits the potentiality of achieving national and/or state mandated levels of achievement.

It is assumed that systems thinking and viewing schools as learning organizations will lead school stakeholders to make meaningful changes. Schools must develop and ascribe to strong and binding professional norms. It is essential to understand how schools significantly differ from one another. It is also important to recognize how schools of diverse ranking conditions are similar to one another.

Structures of Effective School Learning Organizations

According to Senge (1990), five disciplines define an effective learning organization. They include systems thinking; personal mastery; mental models; shared vision; and team learning. Systems' thinking examines an organization, such as a school, from a holistic approach. As such, an entire organizational structure is analyzed to determine how individual components interact to affect the success of the institution. This study was designed to examine the structural equity issues present in middle school educational settings.

School staff striving for personal mastery work toward the collective goals of the organization. In a systems thinking school, all members work toward high levels of collective proficiency. Vision and energy are focused toward organizational goals. The mental models organizational discipline (discipline three) is created through deeply engrained assumptions, generalizations, and images held by school stakeholders. Mental models are maintained through organizational openness and internal pictures. The fourth discipline (shared vision) also is predicated by organizational climate. Its focus is the creation of genuine commitment, rather than compliance. Finally, organizations cannot learn and change without team learning. In the creation of a healthy school culture and climate, team intelligence exceeds individual intelligence.

Effective middle schools are structurally organized to promote the healthy development of its students. According to the Intermediate/ Middle Childhood Standing Committee of the Association for Childhood Education International (Manning, 2000), a student-centered middle school has a sixth through eighth grade configuration. Instructional practices emphasize developmentally appropriate education targeted at 10 to 15 year old adolescents. The learning environment is safe, violence-free, and peaceful. Students are provided with the opportunity to develop civic responsibility through participation in service learning, citizenship events, and community social events.

Goal-driven, student-centered advocacy programs are considered essential components of the middle school program. The Carnegie Council on Adolescent Development (1989) stated that a "volatile mismatch exists between the traditional organization and curriculum of middle grades schools and the intellectual, emotional, and interpersonal needs of early adolescents." While this statement was made more than 22 years ago, the diverse organizational approach currently employed in middle schools retains the contemporary status of the issue. One that is based upon the structural equity of schools across ranking conditions.

Professional learning communities emphasize collaborative teaming as an important component to school success. Senge (1990) defined the concept of team as a group of individuals who trust and complement each other for the greater goal of functioning together to achieve common goals, compensate for limitations, and to achieve extraordinary results. Adolescent affective development is shaped by a sense of safety, support, encouragement, and belongingness. A strong school community is formed. This sense of community translates into high achievement for students of all abilities. "Student achievement increases substantially in schools with collaborative work cultures that foster a professional learning community among teachers and others" (Fullan, 2002, p. 8).

Organizational structure influences behavior. Given that people within a system tend to produce the results the system creates, it may be stated that school effectiveness is predetermined by the system in which the roles of teaching

and learning occur. High ranking schools may be expected to have healthy organizational learning structures. Low ranking schools are expected to have organizational learning disabilities (Senge, 1990). Structure produces behavior. Changing underlying structures can produce different patterns of behavior. In schools with an organizational learning disability, staff is believed to have no or little influence over organizational policy. School community members assume little organizational responsibility. This study was designed to examine how organizational behavior changed across school ranking conditions at the middle school level.

Healthy schools are more apt to succeed in implementing school reform models because their inherent structures are open. Middle schools with a healthy school climate are designed to accept change. School stakeholders see the change process as progressive and goal-directed. Schools that fear change and lack direction with respect to school reform often have an unhealthy school climate. In organizationally disabled schools, administrative teams are responsible for resolving critical issues. "Changing a toxic school culture into a healthy school culture that inspires lifelong learning among students and adults is the greatest challenge of instructional leadership" (Barth, 2002, p. 6).

Method

Participants

Public middle schools, configured sixth through eighth grade, in one Midwestern state were contacted to participate in the research project. Of the 215 schools contacted, thirty-seven of the responding schools (17%) agreed to participate in the study. Administrators from 33 schools (15%) agreed to complete a survey and provide access to classroom teachers for participation in the teacher survey. Administrators from the remaining four schools agreed to sit for a principal interview. Access to teachers in these four schools was not possible.

After recruitment efforts were completed, the investigator mailed 465 surveys to those participants who had agreed to be included in the sampling plan. Three hundred thirty eight (73%) completed surveys were returned. The sample consisted of 291 teachers, 14 administrative team members, and 33 principals (see Table 2). Of the 291 teacher respondents, 135 individuals (40%) identified themselves as a grade level teacher. Ten percent of the teacher respondents identified themselves as a content specialist, 122 claimed to be a grade level content specialist and 14% were administrators. The sample included about 3% of the state's full-time equivalent educators. **(See Table 2)**

Instrumentation

Survey questions were adapted from the revised middle school version of the Organizational Health Instrument (OHI-RM) developed by Hoy and Sabo (1998). The OHI-RM was designed to document and describe the health and well-being of behaviors and interactions within a school (See Table 3). In a healthy school, the institutional, managerial, and technical levels are in harmony (Hoy & Feldman, 1987). Institutional control is based upon school autonomy from outside forces. Managerial control indicates that administrators have collegial relationships with the staff as well as influence over the attainment of educational resources from superiors. Principals demonstrate task and achievement orientation. They are also able to provide supplies and instructional materials for their teachers. The technical level of control is concerned with the degree of teacher affiliation to the organization, academic emphasis, and staff morale.

Given that organizational health was targeted for study, information was compiled (See Appendix) related to issues such as access to instructional resources, the selection of instructional methodology and teaching strategies, teaching staff motivation and enthusiasm, and perceptions held regarding the instructional leadership present within the school. The manner in which the principal resolves classroom issues, maintains equality within the school, demonstrates concern for others, sets clear expectations for teachers and students, and interacts with school stakeholders speaks of the organizational health of the educational institution. **(See Table 3)**

Design and Procedure

An interest in the relationships between school organizational health and student academic achievement at the middle school level led to the use of a mixed methodological research design. For the collection of quantitative data, a survey questionnaire reflected participant perceptions of their own interactions within the middle school organization in which they worked. It is these perceptions that were believed to either enable or hinder school effectiveness and reform initiatives. The survey questions were clustered around seven topics including demographic information, middle school structure, school climate, health, culture, curriculum implementation, and standardized testing.

Administrative team members (n=14) and principals (n= 33) were asked to complete the full battery of 165 questions. To enhance teacher response rates, each question contained within the long administrative survey instrument was equally divided into three teacher survey forms (Form A, Form B, and Form C). Each teacher survey form contained 55 randomly selected questions from the OHI-RM (See Appendix). Each form also contained 10 demographic questions that were common to all teacher survey forms.

Middle school organizational structures were carefully evaluated across school ranking conditions. To rank each of the 33 participating middle schools, the overall state standardized test averages were obtained from the state's board of education school report card database. Average

Table 2: Sample Participants by Career Status and School Ranking

Grade Level Teacher	19 (6%)	100 (30%)	16 (5%)	135 (40%)
Content Specialist	2 (1%)	30 (9%)	2 (1%)	34 (10%)
Grade Level Content Specialist	17 (5%)	91 (27%)	14 (4%)	122 (36%)
Administrator	8 (2%)	33 (10%)	6 (2%)	47 (14%)
Total	46 (14%)	254 (75%)	38 (11%)	338 (100%)

Table 3: Sample Items from the OHI-RM

INSTITUTIONAL INTEGRITY	
	Teachers are protected from unreasonable community and parental demands.
	The school is vulnerable to outside pressures.
	A few vocal parents can change school policy.
PRINCIPAL INFLUENCE	
	The principal gets what he or she wants from superiors.
	The principal is able to work well with the superintendant.
	The principal is impeded by superiors.
RESOURCE SUPPORT	
	Extra materials are available if requested.
	Teachers have access to needed instructional materials.
	Supplementary materials are available for classroom use.
ACADEMIC EMPHASIS	
	The school sets high standards for academic performance.
	Students respect others who get good grades.
	The learning environment is orderly and serious.

(Hoy & Feldman, 1987, 33)

referred to the percentage of students who met or exceeded state standards on the standardized assessment. Low ranking schools were categorized as those with state test scores one or more standard deviations from the mean. High ranking schools had state test scores one or more standard deviations above the mean. Middle ranking schools had state test scores within one standard deviation above or below the mean. The sample contained four low ranking schools, 25 middle ranking schools, and four high ranking schools.

To analyze the data set, a series of ANOVA tests (*F*-tests) were used to determine differences in the survey responses across the three school categories (high, middle, and low ranking). Mean scores for each question within each dependent variable construct was calculated. A grand mean score for each school-ranking cluster was tested for significance using the Scheffe post-hoc test (.05 level of significance).

This data analytic plan is similar to the procedure Hoy and Sabo (1998) used to analyze results gathered from their study using the OHI-RM with a sample of New Jersey middle school teachers. Hoy and Sabo used an item score analysis approach to analyze their data set. In the present study, data sets were compiled from 33 middle schools and categorized across three ranking conditions (high, middle, and low). Each parsed out data set was analyzed using ANOVA procedures and the Scheffe post-hoc test to document significant differences in the triangulated sets of dependent measures across school ranking conditions.

After survey data was collected, teacher and administrator interviews and focus groups were conducted. Site visits were conducted at 11 of the participating school sites in all regions of the state- urban, suburban, and rural. Results obtained from the survey questionnaires were used to develop the interview and focus group questions. Thirty-six principals, administrative team members, and teachers participated in the interview/ focus group process. Reported herein are the perspectives held by teachers and administrators of three of the eleven schools. Each of the three ranking conditions are represented- high, middle, and low.

Results

> A healthy middle school is a pleasant place. It is protected from unwarranted intrusion. Teachers like the school, the students, and each other, and are enthusiastic about their work. Teachers see students as serious and diligent in their learning. They see the principal as their ally in the improvement of instruction; the principal is friendly, open, respectful, and supportive, and yet establishes and is committed to high standards of teacher performance. The principal also has influence with organizational superiors and is seen as someone who can deliver, as well as one who can get teachers the instructional materials they need. The healthy school has no need to coerce cooperation; it is freely given by teacher professionals who are committed to teaching and learning (Hoy & Sabo, 1998, p. 73).

The underpinning research question was to determine whether educational equity in a Midwestern state's middle schools resulted from organizational structural problems. In other words, were the middle schools included in the sampling plan structurally different across school ranking conditions? If so, what were those differences and how may middle schools take proactive steps in diminishing structural gaps that may lead to achievement disparities?

The structural profile, across school ranking conditions, of middle level education in one Midwestern state was the goal of this study. Therefore, several middle school characteristics (Figure 1) were reported: middle school structures, organizational health, institutional integrity, teacher affiliation and commitment, and collegial leadership.

School Organizational Health

School health was measured on three levels (institutional, managerial, and technical). Six health constructs were used to define each of these levels (institutional integrity at the institutional level, academic emphasis and teacher affiliation at the technical level, and principal influence, collegial leadership, and resource support at the managerial level). School organizational health was perceived to be significantly different across the school ranking conditions (F = 13.877, > .000). Significant differences were present between high ranking and middle ranking schools (> .002) and between high and low ranking schools (> .000).

The Organizational Health Inventory (OHI-RM) was used to measure school climate at the institutional, managerial, and technical levels. The construct that was used to delineate the institutional level was integrity. The presence of institutional integrity meant that the school did not succumb to environmental pressures from parents and community. The managerial level addressed collegial leadership, principal influence, and resource support. An equitable, supportive, friendly, and open principal who communicated expectations for high performance defined collegial leadership. Resource support meant that teachers had access to adequate and even extra supplies and instructional materials. The technical level survey items were designed to measure teacher affiliation and academic emphasis. Teachers felt positively connected to the school in terms of relationships with and commitment to colleagues and students. They had the desire to accomplish their work with enthusiasm. Academic emphasis meant that individuals within the school strove for excellence with high but achievable goals. Students were provided with a safe and conducive learning environment. Teachers had confidence in student ability and students had the drive to succeed and respected academic excellence.

No significant differences were reported between high and middle ranking schools, high and low ranking schools, or middle and low ranking schools in terms of institutional integrity. Respondents indicated that all schools regardless of ranking were "sometimes" vulnerable to outside pressures. All participant schools accepted community demands even if they did not correspond to the underlying mission of the school. Yet, teachers from high ranking schools might have felt "more pressure from the community" than did teachers in middle and low ranking schools. Overall, teachers felt protected from unreasonable community and parental demands. It appeared that school ranking conditions were not a statistically significant contributing factor with respect to determining which communities had more influence over school policies (F = 2.212, < .114). But, vocal parents in high ranking schools had a greater likelihood of changing school policies than did parents at middle and low ranking schools. With respect to parental influence over changes in school policies, there appeared to be no difference between middle and low ranking schools (< .999).

Teachers from the high-ranking schools perceived that there were several opportunities for parents and community members to come into the school. Parents in the high ranking school, similar to those in the middle and low ranking school were perceived by the teachers as "some are very willing to

help while others may sign up and then they drop the ball." Yet, during conferences and open house, the high ranking school had "real close to "100 percent participation." Another teacher from the high ranking school reported that "if I have to call a parent to deal with a problem, I'm 90 percent sure the parent will do what they have to do."

Teachers in the middle ranking schools tried to empathize with the parents for their lack of involvement. They said, "(We) don't know if it's that they don't care, it's that they are busy. A lot of (students come from) single parent homes. (Parents) are working. (We) do not think there is a lot of free time. We are in a low socioeconomic area." Teachers in the low ranking school said, "You would be surprised how many of their parents don't work. Many of the students do not see a career as they grow up. They just see, well I'll get a check." The low ranking school was a Title 1 school with 40 percent or more of its student population eligible for free or reduced lunch.

Brown and associates (2003) reported a stark difference across the school ranking conditions in terms of school helpfulness in the high ranking community as compared to school neediness in the low ranking community. It appeared that institutional integrity as reported by Brown and associates study revealed an "us versus them" stance when examining high ranking versus low ranking schools.

Students in high ranking schools tried significantly harder than students in middle ranking schools to improve academically. Significant differences were found between high and low ranking schools. Students in high ranking schools tried significantly harder to improve on previous work than did their peers in middle ranking schools (F = 6.393, > .011). Students in high ranking schools often made provisions to acquire extra help (F = 7.630, > .004) as well as seek extra work so that they could get good grades (F = 7.090, > .002). Participants in high ranking schools perceived that their students were significantly more likely to respect others who got good grades. It was the belief of teachers in high ranking schools that their students had the ability to achieve academically. Whereas, students in low ranking schools were reported to neglect homework and to ridicule academically oriented students. The principal of a middle ranking school contended that, "We don't allow the harassment or bullying. I'm old fashioned and I just don't put up with it." Academically oriented students in high ranking schools were reported to be rarely ridiculed by peers (F = 4.846, > .032).

Brown and associates (2003) "surfaced glaring differences" among teachers in high performing suburban schools and low performing urban schools in terms of establishing high standards and achieving them as well as building an orderly learning environment and perceiving the potential of student success. The present study found high and middle ranking schools were found to be significantly different with respect to academic emphasis as were high and low ranking schools. But, no significant differences were found between middle and low ranking schools.

The principal of the middle ranking school reported, "Right now, we are in the process of going through what they are doing in class and tying it to state standards. If it is not appropriate, it goes out. Even though, it may be beneficial. We are getting judged on those standards. What we teach needs to be coordinated with those standards." Teachers in the low ranking school indicated that they had very little influence over textbook selection or curriculum implementation. One teacher said, "They (district administration) let you (the teacher) believe that you have" an influence over textbook adoption. "Then you go to a meeting and you are guided." Curriculum development and implementation at the high-ranking school is developed by department through a collaborative decision making process. "We are always working on our scope and sequence, changing and adjusting." Every three to four years the curriculum is revamped. A teacher from the high-ranking school said, "some of it is dependent on test scores. If they are high enough things are good. If they drop a year, oh God! It's like, what do we do then…? This community is very much into being among the top."

Similar findings between the Brown and associates (2003) study and the current study were also identified in terms of teacher affiliation. In the present study, it was reported that teachers in high ranking schools liked each other, exhibited friendliness to one another, and volunteered to help their colleagues significantly more so than did teachers in middle ranking schools. Results of the Brown and associates study found that teachers in high performing schools were much more enthusiastic, were positive about their school cultures, and felt secure and satisfied.

Teachers in high ranking schools were also significantly more enthusiastic about their jobs and showed a greater commitment to their students than did teachers in middle ranking schools. Teachers in middle ranking schools were significantly less likely to act in a cool and aloof manner toward colleagues. Whereas, teachers in low ranking schools were reported to be more cool and aloof toward each other albeit on rare occasion.

Divisive findings within the current study and the Brown and associates (2003) study were noted in terms of perceptions of collegial leadership. Teachers in the high performing schools often viewed their principal as an instructional leader who is accessible to his/ her teachers. The principal was often viewed as someone teachers could collaborate with in the reform of instruction (F = 2.072, <.809). Middle ranking schools were strongly similar to the low ranking schools in terms of principal accessibility.

High and low ranking schools were reported to be significantly different in terms of resource support. Teachers in high ranking schools were significantly more likely than

their peers in middle and low ranking schools to receive adequate or extra materials for their classroom. Needed instructional materials were significantly more accessible in high ranking schools as compared to low ranking schools. Participants in low ranking schools reported that they were significantly less likely to receive their fair share of resources from the district. High and middle ranking schools were roughly equal in their access to supplementary materials and teachers had access to needed instructional materials. These results were quite similar in the Brown and associates (2003) study as well.

Leadership Attributes and Equitable Structures

Statistically significant differences were found with respect to the school leadership component of middle school organizational structures. It was found that strength in leadership was significantly different in low ranking schools compared to middle ranking schools (F = 4.066, > .020). Almost all participants in low ranking schools reported that they perceived their school's principal to be a strong leader. High and middle ranking schools were found to be strongly similar in terms of leadership strength (F = 4.006, < .999). More sample participants from high ranking and middle ranking schools perceived the school leadership to be weaker than what was reported by staff at low ranking schools. It might be assumed that teachers in high and middle ranking schools perceive their principals to be more similar to equivalent peers. Whereas, teachers in low ranking schools perceive principals as their superiors.

One of the principal's representing the middle ranking school cited district administrative structures as critical to equitable implementation and success of the middle school concept. The principal reported, "the district has had a great turnover in superintendents. There has not really been anybody to really step in. The superintendent we have this year has stepped in. She has brought everybody together and made us feel that our input is important. This is the third one in the past five years. Last year, we had two interims, which I did not count. We are probably talking five of them because we had one first semester and a different one second semester."

In the low ranking school, district administration was described by the teachers as having a huge impact on the school, but was perceived as "not being in touch with reality." "People that were in the classroom 20 years ago come down here and peek in to see if we are doing the (state standardized assessment)." "It doesn't matter what kind of teacher you are, some kids are never going to pass. They do have a lot to say. It goes to our principals and filters down to us. We're the workers. They are the leaders. It's very disorganized."

Middle School Structures

Although distinctions persist, no significant differences were found among the school ranking conditions with respect to flexible scheduling (F = 1.256, < .290), accessibility to guidance counselors (F = 1.938, < .148), or interdisciplinary teaming practices (F = 1.653, < .197). It was reported that many middle schools do not employ flexible class scheduling practices. It appeared that high ranking schools were less likely to implement flexible class scheduling practices. While middle and low ranking schools appeared to employ the practice at a higher and roughly equivalent rate. In reference to whether students have access to guidance counselors, it appeared that the relationship between school ranking conditions and access to guidance counselors was linear. Students at high ranking schools were reported to have the most access to guidance counselors, while students at low ranking schools had the least access to guidance counselors.

In some districts, it appeared that the middle school concept was in grave danger of disappearing. The principal in the middle ranking school reported that he believed that "some of the (enrichment programs) were disappearing and quite possibly the whole middle school concept. The middle school concept does require more money." The principal was asked if teachers would have any input into the possibility of dismantling the middle school concept. The principal of the middle ranking school responded, "I'm sure they will have some input on that. They will be able to speak their peace. But, all in all, it will be the school board's decision."

One of the underpinning tenets of the middle school philosophy is based upon teachers working within interdisciplinary teams to plan instruction. It was found that most middle schools do implement teaming practices for planning instruction. The results of this study indicated that there were no statistically significant differences with respect to the implementation of interdisciplinary teaming practices across the school ranking conditions. It appeared that almost all the sample participants from the high ranking schools participated in teaming activities.

The principal of the middle ranking school acknowledged the advantages of teaming. He stated, "Teachers really get down to talking about the students. I've sat in on 6th, 7th, and 8th grade teaming sessions just to see what they have done. They really get down to talking about students especially the ones that really need help and assistance. That has been a real big advantage. If you get people who work together, anything is accomplishable. They have great outcomes. We have very good teachers in this building. Very cooperative, no arguing, no fighting. They just get along so well and cooperate with each other." Teachers in the high ranking school perceived their teaching colleagues and the principals as being "a great group of people." The principals "run a good ship. People's thoughts and opinions are real. Administration is readily available and they are not real quick to shut you down." **(See Figure 1)**

Figure 1)- Data Summary of Representative State Middle School Profile

Constructs	Dependent Variable	F-Test	Ranking Relationship
Teacher and Administrator Preparation and Attributes			
	Educational Attainment	*F* = 4.49, >. 015	High compared to Low
	Leadership Strength	*F* = 4.006, >.020	Middle compared to Low
	Leadership Strength	*F* = 4.006, <. 999	High compared to Middle
Middle School Structures			
	Flexible Scheduling	*F* = 1.256, <.290	Compared across High- Middle- Low
	Guidance Counselors	*F*= 1.938, < .148	Compared across High- Middle- Low
	Interdisciplinary Teaming	*F* = 1.653, < .197	Compared across High- Middle- Low
Organizational Health			
	Overall School Health	*F* = 13.877, > .000	Compared across High- Middle- Low
	Community Pressure and Demand	*F* = 2.212, < .114	Compared across High- Middle- Low
	Parental Influence	*F* = 2.212, < .999	Middle compared to Low
Institutional Integrity			
	Academic Effort to Improve on Previous Work	*F* = 6..393, > .011	High compared to Middle
	Students seek extra academic help	*F* = 7.630, > .004	High compared to Middle and High
	Students seek extra work to improve grades	*F* = 7.090, > .002	High compared to Middle and High
	Acceptability of academically oriented students	*F* = 4.846, > .032	High compared to Middle and High
Leadership			
	Collegial leadership	*F* = 7.564, > .003	High to Middle
	Principal's Discussion of Classroom Issues with Teachers	*F* = 2.093, < .901	High to Middle
	Principal Accessibility	*F* = 2.072, < .809	High to Low

Discussion

Statistically significant (.05 level) differences were noted across school ranking conditions in terms of professional teacher preparation, organizational health variables, school leadership characteristics, academic emphasis, and resource support. The general conclusion of this study is that a strong correlation exists between educational equity issues in middle schools and academic achievement. Future studies might focus on middle level education administrative structures in low and middle ranking schools.

The present study also revealed strong similarities between high and low ranking schools. The derivation of this may stem from the overall mission of the middle schools studied. Yet, several factors within the realm of school control set high ranking schools apart from middle and low ranking schools. Teachers in high ranking schools, for instance, consistently had the highest level of advanced preparation. Whereas, middle and low ranking schools employed teachers with minimum preparation- initial certification, entry-level career status, and undergraduate degrees. Further study is needed to determine the extent of teacher mobility upon receiving advanced credentials and years of experience.

Student motivation toward excellence also served a crucial role in distinguishing achievement across school ranking conditions. High ranking schools reported highest levels of academic emphasis. Support of students, expectations for success emanating from teachers and the community were prevalent. Commitment to academic success by both student and adult stakeholders was consistent in high ranking schools.

Correlated to academic success was the sense of collegiality between and among teachers and administrators. School staff in high ranked schools demonstrated commitment and efficacious behavior. Teachers often received the needed resources in high ranking schools. Strong similarities with reference to resources were noted within middle ranking schools as well.

Data analysis revealed several statistical similarities between middle and low ranking schools. Therefore, further study is needed to determine the causal factors of academically successful middle ranking schools in comparison to low ranking. This is particularly important given that low ranking and high ranking schools were similar in many ways. Institutional integrity, for example, was not statistically significantly different across school ranking conditions. All were reported to succumb to pressures from vocal parents and community members. Not all was equal, however. Teachers in high ranking schools reported experiencing greater community influence over school policy than was present in middle and low ranking middle schools.

Principal leadership was reported as the greatest divisive factor across school ranking conditions. Principals in high ranking schools were characterized as having strong rapport with teachers. Study results indicated an inverse effect on reporting of principal strength in high ranking schools. The causality of this attribute may stem from the notion of strength equaling a yield of power and control over the school and its teachers. Principals in high ranking schools were reported to be accessible collaborators with teachers and school stakeholders. Whereas, principals in low ranking schools were perceived as stronger leaders but busy and unavailable. More research is needed to determine the sources of these divisive factors in middle school leadership.

This study was designed to determine whether organizational variables present at the middle school level had a significant impact upon educational equity for all students. In other words, was educational equity at the middle school level attributable to structural institutional problems? The unit of analysis was the middle level education organization. The findings provide considerable support for the view that educational equity at the middle school level is likely to be a structural institutional problem that may create achievement disparities that lead to educational inequities.

In agreement with the contention made by Hoy and Sabo (1998), school climate and student achievement are mutually dependent upon each other. Student achievement, identified by school ranking conditions in this study, cannot be entirely equated to school effectiveness. Standardized test results often used for ranking the effectiveness of middle schools provides a minimalistic view of school structures. The OHI-RM contains six dimensions used to measure structural complexities: academic emphasis and teacher affiliation (teacher behaviors), collegial leadership, resource support, and principal influence (principal behavior), and institutional integrity (relationship between school and community). In sum, positive interpersonal relationships within the school foster higher rates of academic achievement.

The characteristics of healthy organizations include goal-focus, communication adequacy, equitable distribution of influence, personnel resources are used effectively and efficiently, morale and group satisfaction is high, growth and new goals are valued, the organization acts autonomously within its external environment, and change occur for the purpose of growth and problems are solved without exerting too much energy (Hoy & Feldman, 1987). A school's health correlates to less student alienation, motivation, and improved student achievement.

Data analysis supports the same finding Hoy and Sabo (1998) postulated, the organizational health of the middle grades school had a significant impact on student achievement. Significant positive correlations exist between healthy, collegial relationship among teachers and between administration and teachers and student academic achievement. Further, environmental factors, collegiality, professionalism, and academic emphasis are essential to improving academic achievement. When the school has healthy interpersonal relationships among school stakeholders, internal and external, challenges might be constructive and overcome. Quality middle schools are often characterized as open and healthy.

REFERENCES

Barth, R.S. (2002). The culture builder. *Educational Leadership. 59*(8), 6-11.

Brown, K.M., Roney, K., & Anfara, V.A. (2003). Organizational health directly influences student performance at the middle level. *Middle School Journal, 34*(5), 5-15.

Carnegie Council on Adolescent Development (1989). *Turning Points: Preparing American youth for the 21st century*. New York: Carnegie Corporation.

DiBiase, W.J. & Queen, J.A. (1999). Middle school social studies on the block. *Clearing House, 76*, 377-384.

DuFour, R. & Eaker, R. (1998). *Professional learning communities at work: Best practices for enhancing student achievement*. Bloomington, IN: National Education Service.

Fullan, M. (2002). The change leader. *Educational Leadership, 59* (8), 16-20.

Hoy, W.K. & Sabo, D.J. (1998). *Quality middle schools: Open and healthy*. Thousand Oaks, CA: Corwin Press.

Hoy, W.K. & Feldman, J.A. (1987). Organizational health: The concept and its measure. *Journal of Research and Development in Education*: *20*(4), 30-37.

Manning, M.L. (2000). Child-centered middle schools. *Childhood Education*: *76* (3), 154-159.

National Middle School Association. (2010). This *we believe: Keys to educating young adolescents.* Westerville, Ohio: National Middle School Association.

Roney, K. & Coleman, H. (2007). Linking the organizational health of middle grades schools to student achievement. *NASSP Bulletin, 91* (4), 289-321.

Schlechty, P. (1997). *Inventing better schools: An action plan for education reform*. San Francisco:Jossey-Bass.

Senge, P.M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday.